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14 SDCS-ER-76-86

9 Technical rept.

(SDCS)

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**SPECIAL DATA COLLECTION SYSTEM EVENT REPORT**  
**NTS Event 'FONTINA', 12 February 1976.**

10

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11

June 1976

12

16 p.

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**Monitored By**

**VELA Seismological Center**

312 Montgomery Street, Alexandria, Virginia 22314

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SDCS EVENT REPORT NO. 86

NTS Event "FONTINA", 12 February 1976

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JUSTIFICATION	
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This event report contains seismic data from the Special Data Collection System (SDCS), and other sources for the above event. Published epicenter information from seismic observations is:

	"P" Arrival	Origin Time	Lat.	Long.	m <sub>b</sub>	M <sub>s</sub>
NORSAR	14:56:32.2	14:45:06	38 N	116 W	5.9	N/A
Hagfors	14:56:40.5	14:44:56	37 N	117 W	6.4	5.4

Using SDCS stations, LASA and NORSAR, the epicenter location and magnitudes become

14:45:01.7    37.3N    116.5W    6.2    5.9

The programs used for LASA, NORSAR and ALPA data recovery are presently undergoing modifications. Information for LASA short-period is reported from their Teleseism Event Report; NORSAR short-period data is obtained from their bulletin. The long-period array beam recovery for these stations will be resumed upon completion of these modifications.

All SDCS stations were operational during this period.

Short-period signals associated with this event were recorded at all SDCS stations, LASA and NORSAR. WH2YK short-period data were retrieved from the field station digital tape. All SP channels at HN-ME had polarity reversals; to correct this, mathematical inversions of the data were performed. Horizontal SP channels at all SDCS stations were rotated.

Long-period signals were recorded at all SDCS stations. WH2YK long-period data were retrieved from the field station digital tape. Operating gains of the LP channels at RK-ON were unknown because the calibration and operation db settings could not be determined from the station log. All LP channels at HN-ME and the LP radial channel at RK-ON had polarity reversals; to correct this, mathematical inversions of the data were performed. Horizontal LP channels at all SDCS stations were rotated.

Scaling factors on plots are millimicrons at 1 Hz (not corrected for instrument response).

# STATION DESCRIPTION

SITE CODE	LOCATION	SITE COORDINATES DEG MN SECS	ELEVATION METERS	INSTRUMENTATION	
				SHORT-PERIOD	LONG-PERIOD
ALPA	Alaska	65 14 00.0 N 147 44 36.0 W	626	None	31300
CPSO	McMinnville, Tennessee	35 35 41.4 N 085 34 13.5 W	574	6480 V 7515 H	SL210 V SL220 H
FN-WV	Franklin, West Virginia	38 32 58.0 N 079 30 47.0 W	910	KS36000	KS36000
LASA	Billings, Montana	46 41 19.0 N 106 13 20.0 W	744	HS10	7505A V 8700C H
HN-NE	Houlton, Maine	46 09 43.0 N 067 59 09.0 W	213	KS36000	KS36000
NORSAR	Kjeller, Norway	60 49 25.4 N 010 49 56.5 E	379	HS10	7505A V 8700C H
RK-ON	Red Lake, Ontario	50 50 20.0 N 093 40 20.0 W	366	18300	SL210 V SL220 H
WH2YK	White Horse, Yukon	60 41 41.0 N 134 58 02.0 W	853	18300	SL210 V SL220 H

Note: The orientation of the radial instruments at FN-WV is assumed to be 16° + 5° based on empirical data (event recordings). Rotation, where performed, is referenced to this azimuth and may be questionable.

# HYPOCENTER DETERMINATION

INPUT FOR EVENT 12 FEB 76  
14:45:00.0 37.000N 116.000W 0KM.

STA.	ARRIVAL	RESIDUALS		DIST.	AZ.
		CALC	REST		
LAO	14 47 54.5	-0.0	0.5	12.1	35.9
RK-ON	14 49 46.5	-0.1	-0.8	21.1	43.0
CPSD	14 50 25.4	-0.1	0.6	24.9	84.5
WH2YK	14 50 37.4	0.1	0.6	25.2	339.3
PN-WV	14 51 03.0	-0.0	0.1	29.1	76.1
HN-ME	14 52 09.9	0.5	-0.0	36.7	60.4
NAO	14 56 32.2	-0.3	-1.0	73.2	24.0

## 67 HERRIN TRAVEL TIME TABLES

ORIGIN	LAT.	LONG.	DEPTH (KM)	SDV	IT	STA
14:45:12.3	37.671N	116.199W	67. CALC	0.2	4	7
14:45:01.7	37.310N	116.470W	0. REST	0.7	3	7

CALC				REST			
1	.	1		1	.	1	
0	.	0		0	.	0	
0	0.	3	2	0	0.	3	2
.	.	.	.	.	.	.	.
0	0.	0	0	0	0.	0	0
0	.	0		0	.	0	
0	.	0		0	.	0	

CHI2 COVERAGE ELLIPSE; 95 PER CENT CONF..LEVEL, SDV= 1.68  
MAJOR 51.7KM. MINOR 37.9KM. AZ= 30 AREA= 7353 SQ.KM. REST

# DATA SUMMARY

INPUT FOR EVENT 12 FEB 76  
14:45:00.0 37.000N 116.000W 0KM.

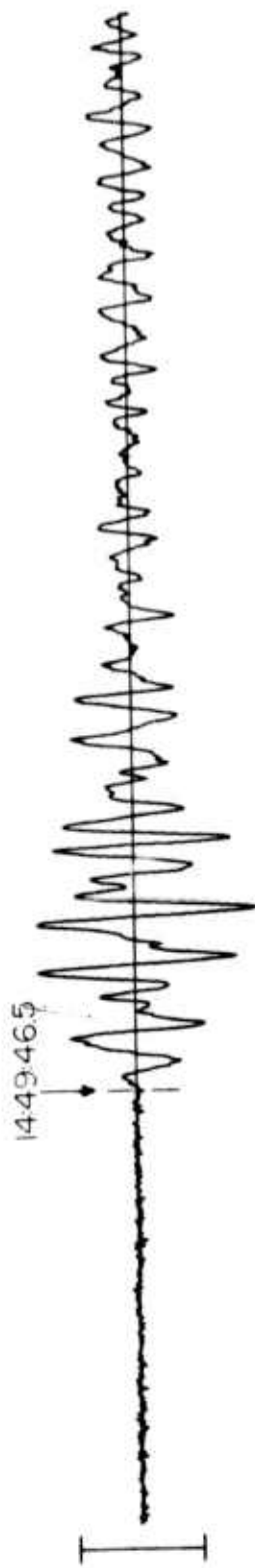
STA.	PHASE	ARRIVAL		INST	PER	A/T	MAGNITUDE		DIR	DIST
		TIME					MB	MS		
LAO	EP	14 47 54.5		SAB	99.9	9999.				
RK-ON	EP	14 49 46.5		SPZ	1.1	3439.	6.35			21.1
RK-ON	LQ	14 56 52.0		LPT	18.0	9999.				
RK-ON	LR	14 58 41.0		LPZ	13.0	9999.		0.0		21.1
CPSO	EP	14 50 25.4		SPZ	0.8	3016.	6.65			24.9
CPSO	LQ	14 58 45.0		LPT	17.0	2372.				
CPSO	LR	15 00 28.0		LPZ	15.0	8834.		6.46		24.9
WH2YK	EP	14 50 37.4		SPZ	1.0	520.	5.93			25.2
WH2YK	LQ	14 59 35.0		LPT	20.0	1463.				
WH2YK	LR	15 01 53.0		LPZ	18.0	1792.		5.79		26.2
FN-WV	EP	14 51 03.0		SPZ	1.5	686.	6.14			29.1
FN-WV	LQ	15 00 58.0		LPT	18.0	2584.				
FN-WV	LR	15 03 06.0		LPZ	18.0	4382.		6.22		29.1
HN-ME	EP	14 52 09.9		SPZ	1.3	1789.	6.48			36.7
HN-ME	LQ	15 04 59.0		LPT	20.0	1839.				
HN-ME	LR	15 07 34.0		LPZ	20.0	931.		5.55		36.7
NAO	EP	14 56 32.2		AB	0.9	223.	5.93			73.2

ORIGIN	LAT.	LONG.	DEPTH (KM)	MAG	SDV	STA	LP MAG	LP SDV	LP STA
14:45:12.3	37.671N	116.199W	67. CALC	6.15	0.37	5	5.89	0.3	3
14:45:01.7	37.310N	116.470W	0. REST	6.23	0.32	6	5.89	0.3	3

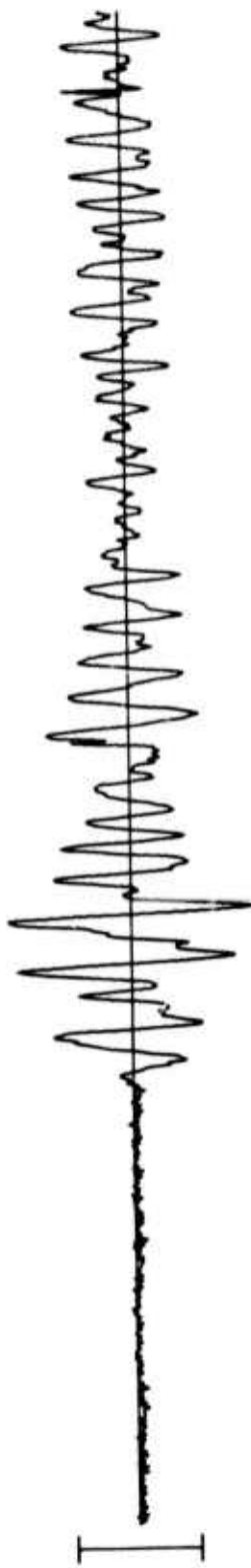
Average long-period magnitude ( $M_S$ ) is based on Rayleigh wave observations in the period range of 17 to 23 seconds per cycle.

RK-ON 12 FEB 76

SPZ  
1643.64 MU



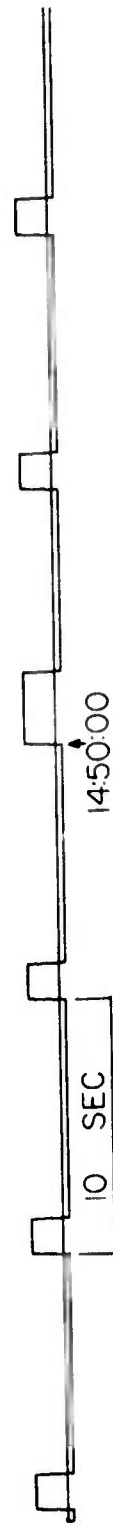
SPR  
804.85 MU



SP<sup>T</sup>  
264.57 MU



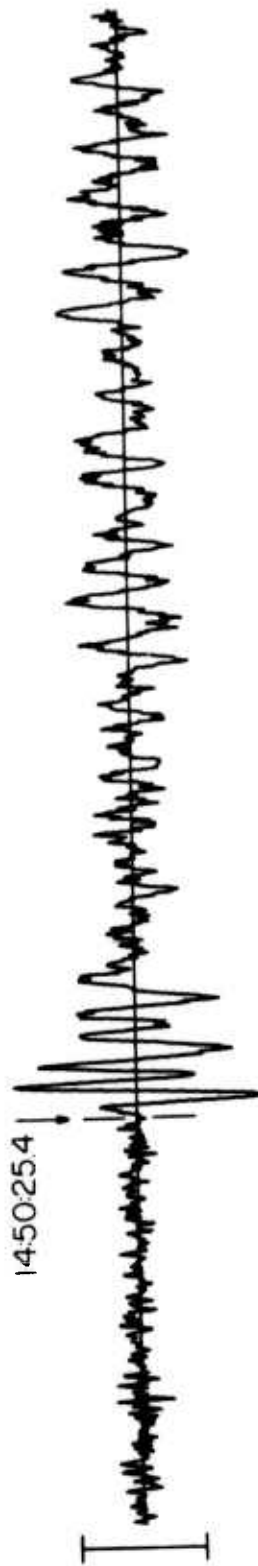
TIME



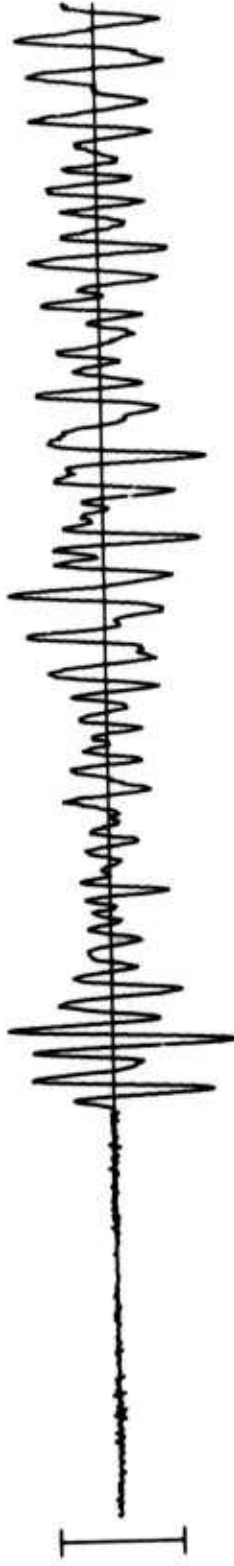


CPS0 12 FEB 76

SPZ  
1610.63 MU



SPR  
513.38 MU



SPT  
311.18 MU

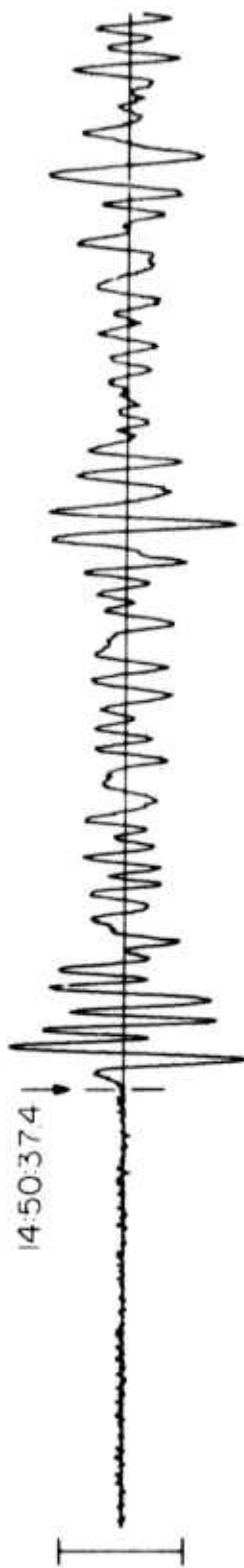


TIME

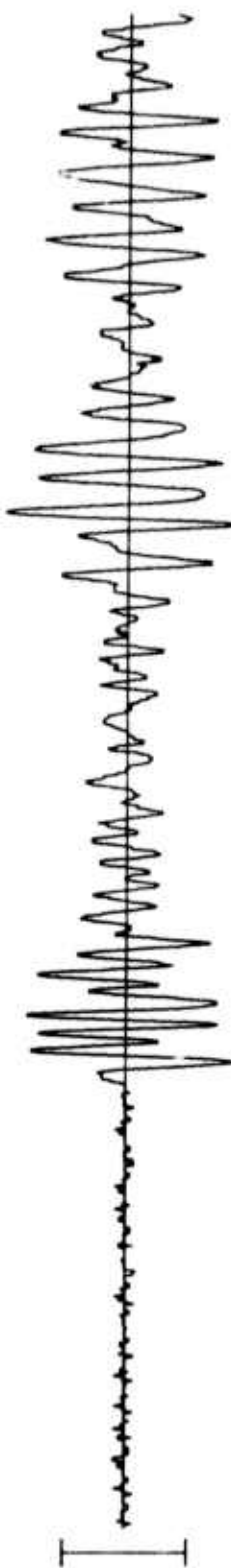


WH2YK 12 FEB 76

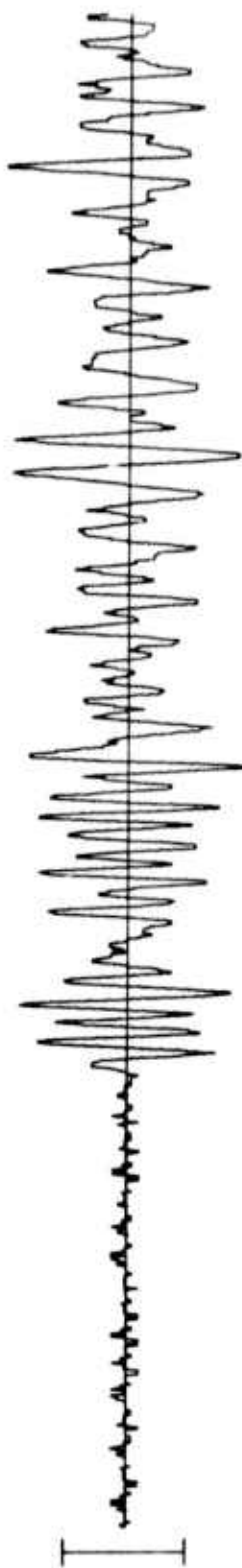
SPZ  
281.00 MU



SPR  
178.00 MU

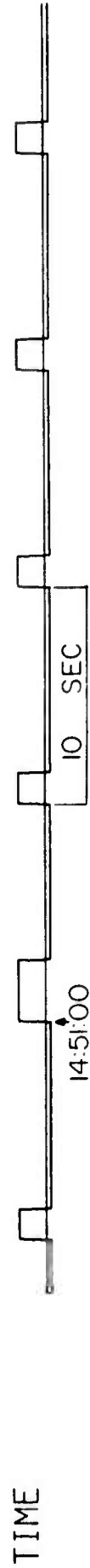
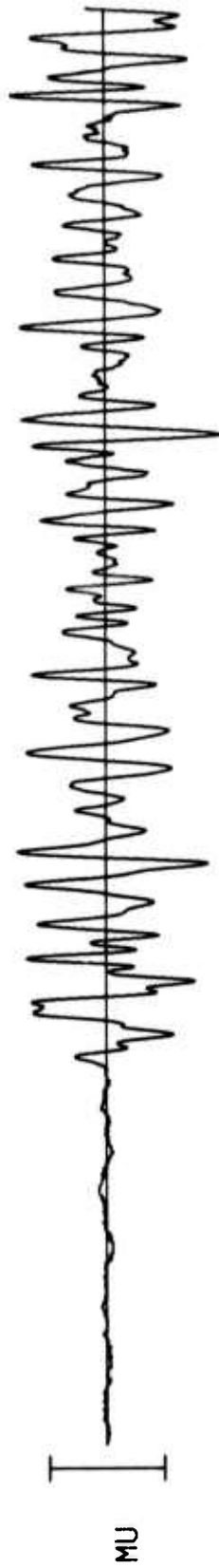


SPT  
116.00 MU



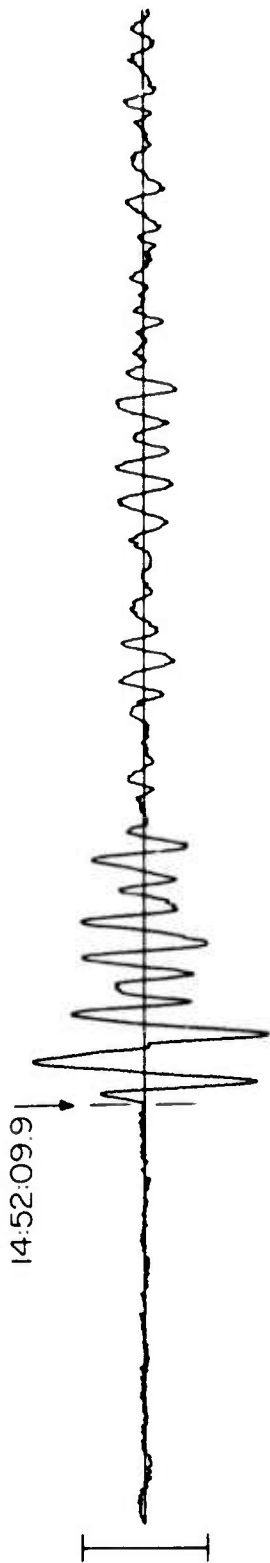
10 SEC

FN-WV 12 FEB 76

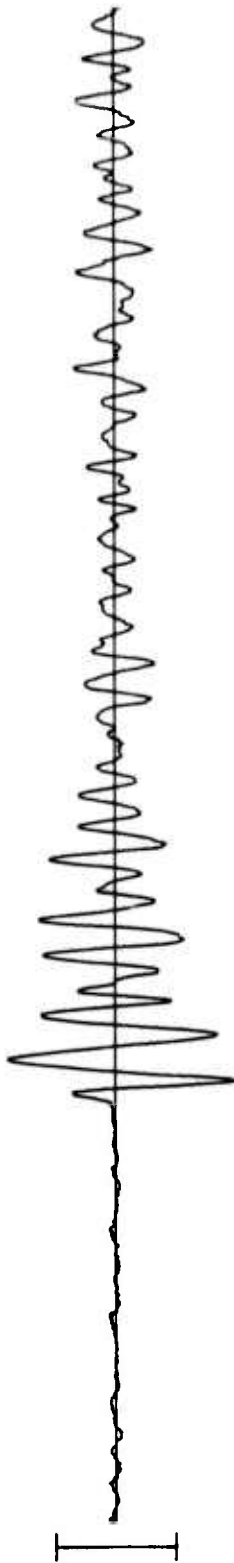


HN-ME 12 FEB 76

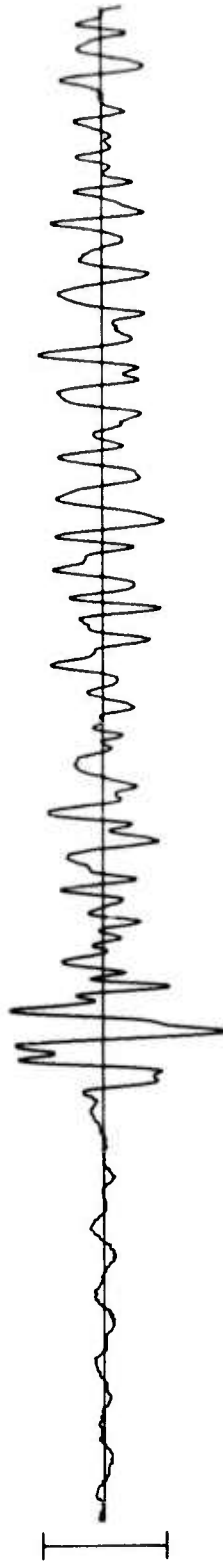
SPZ  
721.80 MU



SPR  
379.71 MU



SPT  
186.96 MU

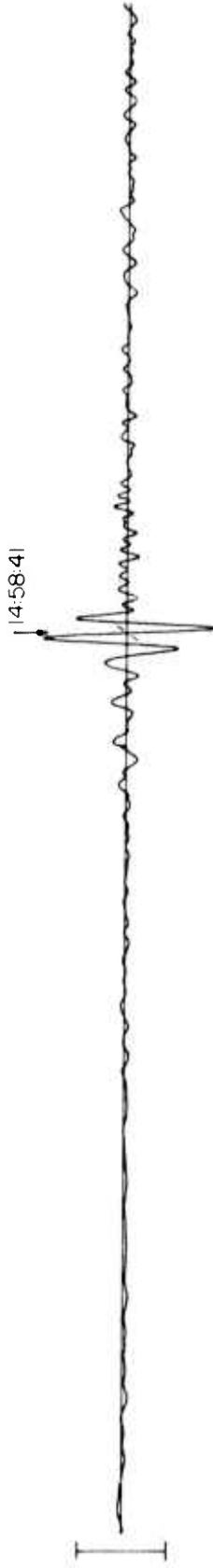


TIME



RK-ON 12 FEB 76

LPZ  
UNKNOWN



LPR  
UNKNOWN



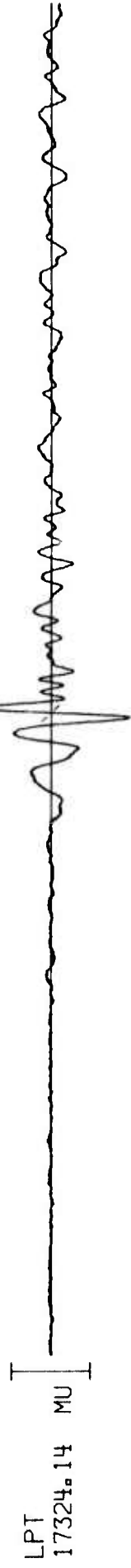
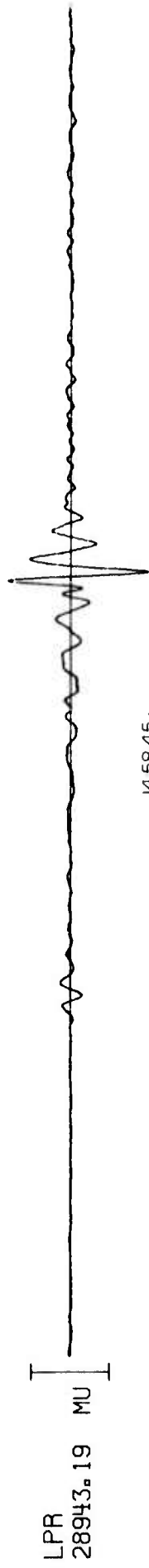
LPT  
UNKNOWN



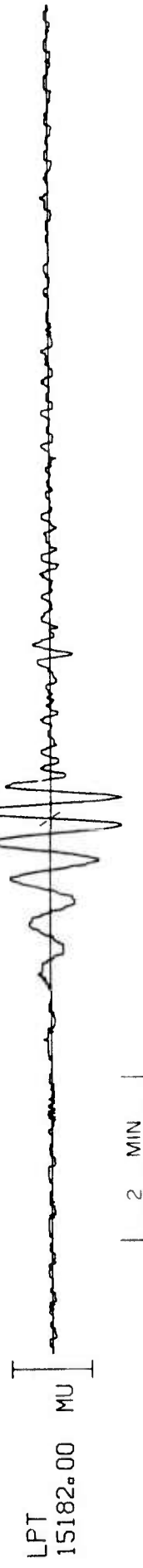
TIME



CPS0 12 FEB 76

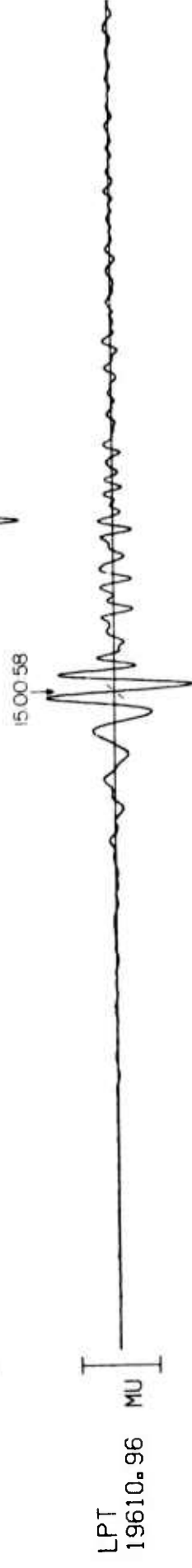


WH2YK 12 FEB 76



2 MIN

FN-WV 12 FEB 76





HN-ME 12 FEB 76

